



State of Idaho
Department of Environmental Quality
Air Quality Division

**AIR QUALITY PERMIT
STATEMENT OF BASIS**

Permit to Construct No. P-2008.0131

Proposed for Public Comment

Freedom Plastics, Inc.

Preston, Idaho

Facility ID No. 041-00014

November 5, 2008

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Permit Writer

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01. et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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Acronyms, Units, and Chemical Nomenclature

AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
Btu	British thermal unit
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
gr	grain (1 lb = 7,000 grains)
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
HAP	Hazardous Air Pollutant
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pounds per hour
m	meter(s)
MACT	Maximum Achievable Control Technology
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
MMBtu	million British thermal units
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
PC	permit condition
PM	particulate matter
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
PVC	polyvinyl chloride
Rules	Rules for the Control of Air Pollution in Idaho
scf	standard cubic feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	Synthetic Minor
SO ₂	sulfur dioxide
SO _x	sulfur oxides
TAP	Toxic Air Pollutant
T2	Tier II operating permit
T2/PTC	Tier II operating permit and permit to construct
T/yr	tons per year
UTM	Universal Transverse Mercator
VOC	volatile organic compound

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Permittee:	Freedom Plastics, Inc.	Permit No.	P-2008.0131
Location:	Preston, Idaho	Facility ID No.	041-00014

1. FACILITY INFORMATION

1.1 Facility Description

Freedom Plastics, Inc. is a fabricator of plastic pipe fittings that are used for a variety of residential, industrial, and commercial applications. The Freedom Plastics, Inc. facility in Preston, Idaho currently contains multiple natural gas combustion point sources (pipe heaters and space heating furnaces) and volatile organic compounds (VOC) emission generating area sources (gluing station operations).

1.2 Permitting Action and Facility Permitting History

This permit is the initial PTC for this facility.

2. APPLICATION SCOPE AND APPLICATION CHRONOLOGY

2.1 Application Scope

Freedom Plastics, Inc. is proposing to permit an existing PVC plastic pipe fittings manufacturing operation. Freedom Plastics, Inc. uses standard length PVC plastic pipe as a raw material. The full lengths of pipe are cut into the required lengths on a saw. If a cut piece of pipe requires a drilled hole, it is taken to a router station for drilling. The cut pieces of pipe are then taken to the pulling station where they are placed on a heated pad and heated until they achieve the correct flexibility. At this time, a heated mandrel is placed inside the cut pieces of pipe to be pulled through the router hole.

The cut pieces of pipe are then placed in a glycol tank at the required depth and heated for the required amount of time according to the pipe thickness. After which they are moved to a bellling station and placed on a mandrel to make either a hub or a gasket end. When this process is finished, the cut pieces of pipe are taken to the trim-saw for any necessary trimming. If additional pieces of pipe need to be attached, the cut pieces of pipe are taken to the gluing station operation.

In the gluing station operation primer, epoxy, contact cement and other glues as listed in Table 3.1 are used to join the additional pieces of pipe in this operation. The finished plastic pipe fittings are then taken to the shipping area for quality assurance measurements. If a specific fitting requires a gasket, the gasket is glued in with contact cement prior to shipment.

Although the cutting, drilling, and trimming process releases a small amount of particulate matter into the air, these emissions are captured by a filtration system within the building and not vented outside.

2.2 Application Chronology

August 11, 2008	PTC project P-2008.0131 was received by DEQ.
September 9, 2008	Project P-2008.0131 was deemed complete.
November 6, 2008	DEQ sent a draft PTC to the facility for review.
November XX, 2008	30-day public comment period commenced.

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November XX, 2008 The \$5,000 PTC processing fee was received.
 December XX, 2008 30-day public comment period ended.
 December XX, 2008 Final permit and statement of basis were issued.

3. TECHNICAL ANALYSIS

3.1 Emission Unit and Control Device

Table 3.1 EMISSION UNIT AND CONTROL DEVICE INFORMATION

Emission Unit /ID No.	Emissions Unit Description	Control Device Description	Emissions Discharge Point ID No. and/or Description
Glycol Tanks/01	Maximum capacity: 1.85 MMBtu/hr Fuel: natural gas only	N/A	Glycol
Square Heaters/02	Maximum capacity: 0.12 MMBtu/hr Fuel: natural gas only	N/A	Square
Wall Heaters/03	Maximum capacity: 0.03 MMBtu/hr Fuel: natural gas only	N/A	Wall
Infrared Heaters/04	Maximum capacity: 1.2 MMBtu/hr Fuel: natural gas only	N/A	Infrared
Forced Air Furnaces/05	Maximum capacity: 1.685 MMBtu/hr Fuel: natural gas only	N/A	Forced
Primer, Epoxy, Contact Cement, and Glue Use	Primer: IPS Corp. Weld-On P-70 Glue: IPS Corp. Weld-On 811 A-B Epoxy Glue: Arrow Adhesives AA-2304 Contact Cement Glue: IPS Corp. 1969 Green Glue Glue: Weld-On 711 White Glue Glue: Weld-On 711 Grey Glue Glue: Weld-On 719 White Glue Glue: Weld-On 719 Grey Glue	N/A	Primer Epoxy Contact cement 1969Green 711White 711Grey 719White 719Grey

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3.2 Emissions Inventory

Table 3.2 POST PROJECT UNCONTROLLED EMISSIONS ESTIMATES OF CRITERIA POLLUTANTS

Emissions Unit	PM ₁₀	SO ₂	NO _x	CO	VOC	Lead
	T/yr	T/yr	T/yr	T/yr	T/yr	lb/quarter
Point Sources Affected by this Permitting Action						
Glycol Tank Heater	0.06	0.00	0.81	0.68	0.04	0
Square Heaters	0.00	0.00	0.05	0.04	0.00	0
Wall Heater	0.00	0.00	0.01	0.01	0.00	0
Infrared Heater	0.04	0.00	0.53	0.44	0.03	0
Forced Air Furnaces	0.06	0.00	0.74	0.62	0.04	0
Gluing Station Operation	0.00	0.00	0.00	0.00	9.41	0
Total, Point Sources	0.16	0.00	2.14	1.79	9.52	0.0

Table 3.3 POST PROJECT CONTROLLED EMISSIONS ESTIMATES OF CRITERIA POLLUTANTS

Emissions Unit	PM ₁₀		SO ₂		NO _x		CO		VOC		Lead	
	lb/hr ¹	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Point Sources Affected by the Permitting Action												
Glycol Tank Heater	0.01	0.06	0.00	0.00	0.19	0.81	0.16	0.68	0.01	0.04	0	0
Square Heaters	0.00	0.00	0.00	0.00	0.01	0.05	0.01	0.04	0.00	0.00	0	0
Wall Heater	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0	0
Infrared Heater	0.01	0.04	0.00	0.00	0.12	0.53	0.10	0.44	0.01	0.03	0	0
Forced Air Furnaces	0.01	0.06	0.00	0.00	0.17	0.74	0.14	0.62	0.01	0.04	0	0
Gluing Station Operation	0	0	0	0	0	0	0	0		9.41	0	0
Post Project Totals	0.03	0.16	0.00	0.00	0.49	2.14	0.41	1.79	0.03	9.52	0	0

Table 3.4 CHANGES IN CONTROLLED EMISSIONS ESTIMATES OF CRITERIA POLLUTANTS

	PM ₁₀		SO ₂		NO _x		CO		VOC		Lead	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Point Sources Affected by the Permitting Action												
Pre-Project Totals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Post Project Totals	0.03	0.16	0.00	0.00	0.49	2.14	0.41	1.79	0.03	9.52	0.0	0.0
Facility Total Change in Emissions	0.03	0.16	0.00	0.00	0.49	2.14	0.41	1.79	0.03	9.52	0.0	0.0

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Table 3.5 CONTROLLED TAP EMISSIONS SUMMARY

Non-Carcinogenic Toxic Air Pollutants	24-hour Average Emissions Rates for Units at the Facility ¹ (lb/hr)	Non-Carcinogenic Screening Emission Level ³ (lb/hr)	Exceeds Screening Level? (Y/N)
Acetone	4.19E-01	119	N
Barium, soluble compounds	1.45E-05	0.033	N
Benzoyl peroxide	1.21 E-02	0.333	N
Cobalt metal, dust, and fume	1.91E-06	0.0033	N
Copper fume	7.43E-03	0.013	N
Cyclohexanone	5.56E-01	67.7	N
Hexane	8.62E-03	12	N
Manganese fume	1.05E-05	0.067	N
Mercury (Alkyl compounds as Hg)	5.71E-07	0.001	N
Methyl ethyl ketone	8.43E-01	39.3	N
Methyl methacrylate	9.04E-02	27.3	N
Molybdenum soluble compounds	2.17E-06	0.333	N
Naphthalene	2.92E-06	3.33	N
Pentane	1.25E-02	118	N
POM ¹	5.46E-08	2.0E-06	N
Selenium	5.15E-08	0.013	N
Tetrahydrofuran	2.37E+00	39.3	N
Toluene	1.63E-05	25	N
Vanadium, as V ₂ O ₅	4.45E-06	0.003	N
Zinc oxide fume	5.60E-05	0.333	N

¹ Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene (designated by *)

Table 3.6 CONTROLLED TAP EMISSIONS SUMMARY

Carcinogenic Toxic Air Pollutants	Annual Average Emissions Rates for Units at the Facility ¹ (lb/hr)	Carcinogenic Screening Emission Level ² (lb/hr)	Exceeds Screening Level? (Y/N)
Arsenic compounds	3.91E-07	1.50E-06	N
Benzene	1.01E-05	8.0E-04	N
Benzo(a)pyrene*	5.75E-09	2.00E-06	N
Beryllium & compounds	2.66E-08	2.8E-05	N
Cadmium and compounds	2.16E-04	3.7E-06	N
Chromium (VI) and compounds	5.15E-03	3.30E-02	N
Formaldehyde	3.59E-04	5.10E-04	N
3-Methylchloranthrene	8.62E-09	2.50E-06	N
Nickel	4.06E-06	2.7E-05	N

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3.3 Ambient Air Quality Impact Analysis

Table 3.7 FULL IMPACT ANALYSIS RESULTS FOR CRITERIA POLLUTANT(S)

Pollutant	Averaging Period	Facility Ambient Impact (µg/m ³)	Background Concentration (µg/m ³)	Total Ambient Concentration (µg/m ³)	NAAQS (µg/m ³)	Percent of NAAQS
PM ₁₀	24-hour	N/A	N/A	N/A	150	N/A
	Annual	N/A	N/A	N/A	50	N/A
NO ₂	Annual	N/A	N/A	N/A	100	N/A
SO ₂	3-hr	N/A	N/A	N/A	1,300	N/A
	24-hr	N/A	N/A	N/A	365	N/A
	Annual	N/A	N/A	N/A	80	N/A
CO	1-hour	N/A	N/A	N/A	40,000	N/A
	8-hour	N/A	N/A	N/A	10,000	N/A
Pb	Quarterly	N/A	N/A	N/A	1.5	N/A

N/A: The emissions rate is below the modeling threshold; modeling is not required in accordance with State of Idaho Air Quality Modeling Guidance DEQ Publication, December 2002, or alternative threshold approved by DEQ Modeling Coordinator.

4. REGULATORY REVIEW

4.1 Attainment Designation (40 CFR 81.313)

The Freedom Plastics, Inc., facility is located in Franklin County (AQCR 61), which is designated as unclassifiable/attainment for PM_{2.5}, PM₁₀, SO₂, NO_x, and CO, for federal and state criteria air pollutants. Reference 40 CFR 81.313.

4.2 Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201.....Permit to Construct Required

The facility's proposed project does not meet the permit to construct exemption criteria contained in Sections 220 through 223 of the Rules. Therefore, a PTC is required.

4.3 Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401.....Tier II Operating Permits

The facility is not subject to IDAPA 58.01.01.300 through 399 and is not requesting an option Tier II operating permit. Therefore, the requirements of IDAPA 58.01.01.401 do not apply.

4.4 Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.301.....Tier I Operating Permit

The facility is not a Tier I source in accordance with IDAPA 58.01.01.006.113. Therefore, the requirements of IDAPA 58.01.01.301 do not apply.

4.5 Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.312.....Visible Emissions

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The combustion sources at this facility (the glycol tank heater, square heaters, wall heaters, infrared heaters, and the forced air furnaces) are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by PTC condition 2.3.

4.6 Fuel Burning Equipment-Particulate Matter, Standards for New Sources (IDAPA 58.01.01.676)

IDAPA 58.01.01.676.....Fuel Burning Equipment-Particulate Matter, Standards for New Sources

The glycol tank heater, square heaters, wall heaters, infrared heaters, and the forced air furnaces are all “fuel burning equipment” as defined in IDAPA 58.01.01.006.45. However, each piece of equipment has a heat input rating of less than 10 MMBtu/hr. Therefore, these units are not subject to the particulate matter grain loading standard of 0.015 gr/dscf, corrected to 3% oxygen.

4.7 Rules for the Control of Odors (IDAPA 58.01.01.775-776)

IDAPA 58.01.01.775-776.....Rules for the Control of Odors

The facility is subject to the general restrictions for the control of odors from the facility. This requirement is assured by PTC condition 3.4.

4.8 PSD Classification (40 CFR 52.21)

40 CFR 52.21.....Prevention of Significant Deterioration Of Air Quality

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source, not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore, in accordance with 40 CFR 52.21(a)(2), the PSD requirements do not apply.

4.6 NSPS Applicability (40 CFR 60)

The facility is not subject to any NSPS requirements.

4.7 NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements pursuant to 40 CFR 61.

4.8 MACT Applicability (40 CFR 63)

The facility is not subject to any MACT requirements pursuant to 40 CFR 63.

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4.9 CAM Applicability (40 CFR 64)

40 CFR 64 does not apply to this facility because it is not required to obtain a part 70 or 71 permit.

4.10 Permit Conditions Review

This section describes the permit conditions for this initial permit or only those permit conditions that have been added, revised, modified or deleted as a result of this permitting action.

Permit Condition 2.3 establishes a 20% opacity limit for the glycol tank heater, square heaters, wall heaters, infrared heaters, and the forced air furnaces stacks, vents, or functionally equivalent openings associated with the glycol tank heater, square heaters, wall heaters, infrared heaters, and the forced air furnaces.

Permit Condition 2.4 establishes that only natural gas is allowed to be used as fuel in the glycol tank heater, square heaters, wall heaters, infrared heaters, and the forced air furnaces as proposed by the applicant.

Permit Condition 3.3 establishes an annual emissions limits for VOC emissions from the gluing station operation. For an emission limit to be practically enforceable, it is necessary to also include operating, monitoring and recordkeeping requirements, and these are included as Permit Conditions 3.5, 3.6, 3.7, and 3.8.

Permit Condition 3.4 establishes that there are to be no emissions of odorous gases, liquids, or solids from the gluing station operation into the atmosphere in such quantities that cause air pollution.

Permit Condition 3.5 establishes annual usage limits for IPS Corp. *Weld-On P-70* primer, IPS Corp. *Weld-On 811* A-B epoxy, Arrow Adhesives *AA-2304* contact cement, IPS Corp. *1969* green glue, IPS Corp. *Weld-On 711* white glue, IPS Corp. *Weld-On 711* grey glue, IPS Corp. *Weld-On 719* white glue, and IPS Corp. *Weld-On 719* grey glue for the entire gluing station process as proposed by the Applicant. These usage limits were the easiest way for the Applicant to demonstrate compliance with the VOC emissions limit specified in permit condition 3.3.

Permit Condition 3.6 establishes that the permittee shall maintain material purchase records and Material Safety Data Sheets (MSDS) for the entire gluing station process.

Permit Condition 3.7 establishes that the permittee shall maintain material usage records for the entire gluing station process.

Permit Condition 3.8 establishes that the permittee shall maintain monthly VOC emissions records in order to determine and maintain annual VOC emissions for each previous consecutive 12-month period records for the entire gluing station process.

Permit Condition 3.9 establishes that the permittee shall maintain records as required by General Provision 7.

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5. PERMIT FEES

Table 5.1 lists the processing fee associated with this permitting action. In accordance with IDAPA 58.01.01.225, the facility is subject to a processing fee of \$5,000.00 because its permitted annual change in emissions is 13.61 T/yr. Refer to the chronology for fee receipt dates.

Table 5.1 PTC PROCESSING FEE TABLE

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
PM ₁₀	0.16	0	0.16
SO ₂	0.00	0	0.00
NO _x	2.14	0	2.14
CO	1.79	0	1.79
VOC	9.52	0	9.52
HAPS ¹	0	0	0
Totals:	13.61	0.00	13.61
Fee Due	\$5,000.00 Based upon an annual increase in emissions of > 10 T/yr to < 100 T/yr for a new source		

¹ – Metal HAPS emissions were accounted for in the facility's PM₁₀ emissions and VOC HAPS were accounted for in the facility's VOC emissions.

6. PUBLIC COMMENT

An opportunity for public comment period on the PTC application was provided from August 27, 2008 to September 12, 2008 in accordance with IDAPA 58.01.01.209.01.c. During this time, there were comments on the application and there was a request for a public comment period on DEQ's proposed action.

A public comment period was made available to the public from date to date. During this time, comments were/were not submitted in response to DEQ's proposed action. IF COMMENTS WERE RECEIVED INCLUDE THE FOLLOWING TEXT A response to public comments document has been crafted by DEQ based on comments submitted during the public comment period. That document is part of the final permit package for this permitting action.

Appendix A – AIRS Information

Appendix B – Emissions Inventory

Glycol Tank Heater PTE Emissions Calculations:

Table A.1 GLYCOL TANK HEATER PRE- AND POST PROJECT HOURLY AND ANNUAL PTE FOR CRITERIA POLLUTANTS WHEN COMBUSTING NATURAL GAS

Emissions Unit	Rated Heat Input (MMBtu/hr)	Annual Hours of Operation (hrs/yr)	Criteria Pollutant	Emissions Factors (lb/MMBtu) ¹	Hourly Emissions (lb/hr)	Annual Emissions (T/yr)
Glycol Tank Heater	1.85	8,760	PM ₁₀	0.0076	0.01	0.06
			SO ₂	0.0006	0.00	0.00
			NO _x	0.100	0.19	0.81
			CO	0.084	0.16	0.68
			VOC	0.0055	0.01	0.04

1 – Based on AP-42 Table 1.4-1 (7/98) for small uncontrolled boilers for NO_x and CO and AP-42 Table 1.4-2 (7/98) for SO₂, PM₁₀ (assuming all PM is PM₁₀), and VOC.

Square Heaters PTE Emissions Calculations:

Table A.2 SQUARE HEATERS PRE- AND POST PROJECT HOURLY AND ANNUAL PTE FOR CRITERIA POLLUTANTS WHEN COMBUSTING NATURAL GAS

Emissions Unit	Rated Heat Input (MMBtu/hr)	Annual Hours of Operation (hrs/yr)	Criteria Pollutant	Emissions Factors (lb/MMBtu) ¹	Hourly Emissions (lb/hr)	Annual Emissions (T/yr)
Square Heaters	0.12	8,760	PM ₁₀	0.0076	0.00	0.00
			SO ₂	0.0006	0.00	0.00
			NO _x	0.100	0.01	0.05
			CO	0.084	0.01	0.04
			VOC	0.0055	0.00	0.00

1 – Based on AP-42 Table 1.4-1 (7/98) for small uncontrolled boilers for NO_x and CO and AP-42 Table 1.4-2 (7/98) for SO₂, PM₁₀ (assuming all PM is PM₁₀), and VOC.

Wall Heater PTE Emissions Calculations:

Table A.3 WALL HEATER PRE- AND POST PROJECT HOURLY AND ANNUAL PTE FOR CRITERIA POLLUTANTS WHEN COMBUSTING NATURAL GAS

Emissions Unit	Rated Heat Input (MMBtu/hr)	Annual Hours of Operation (hrs/yr)	Criteria Pollutant	Emissions Factors (lb/MMBtu) ¹	Hourly Emissions (lb/hr)	Annual Emissions (T/yr)
Wall Heater	0.03	8,760	PM ₁₀	0.0076	0.00	0.00
			SO ₂	0.0006	0.00	0.00
			NO _x	0.100	0.00	0.01
			CO	0.084	0.00	0.01
			VOC	0.0055	0.00	0.00

1 – Based on AP-42 Table 1.4-1 (7/98) for small uncontrolled boilers for NO_x and CO and AP-42 Table 1.4-2 (7/98) for SO₂, PM₁₀ (assuming all PM is PM₁₀), and VOC.

Infrared Heater PTE Emissions Calculations:

Table A.4 INFRARED HEATER PRE- AND POST PROJECT HOURLY AND ANNUAL PTE FOR CRITERIA POLLUTANTS WHEN COMBUSTING NATURAL GAS

Emissions Unit	Rated Heat Input (MMBtu/hr)	Annual Hours of Operation (hrs/yr)	Criteria Pollutant	Emissions Factors (lb/MMBtu) ¹	Hourly Emissions (lb/hr)	Annual Emissions (T/yr)
Infrared Heater	1.2	8,760	PM ₁₀	0.0076	0.01	0.04
			SO ₂	0.0006	0.00	0.00
			NO _x	0.100	0.12	0.53
			CO	0.084	0.10	0.44
			VOC	0.0055	0.01	0.03

1 – Based on AP-42 Table 1.4-1 (7/98) for small uncontrolled boilers for NO_x and CO and AP-42 Table 1.4-2 (7/98) for SO₂, PM₁₀ (assuming all PM is PM₁₀), and VOC.

Forced Air Furnaces PTE Emissions Calculations:

Table A.5 FORCED AIR FURNACES PRE- AND POST PROJECT HOURLY AND ANNUAL PTE FOR CRITERIA POLLUTANTS WHEN COMBUSTING NATURAL GAS

Emissions Unit	Rated Heat Input (MMBtu/hr)	Annual Hours of Operation (hrs/yr)	Criteria Pollutant	Emissions Factors (lb/MMBtu) ¹	Hourly Emissions (lb/hr)	Annual Emissions (T/yr)
Forced Air Furnaces	1.685	8,760	PM ₁₀	0.0076	0.01	0.06
			SO ₂	0.0006	0.00	0.00
			NO _x	0.100	0.17	0.74
			CO	0.084	0.14	0.62
			VOC	0.0055	0.01	0.04

1 – Based on AP-42 Table 1.4-1 (7/98) for small uncontrolled boilers for NO_x and CO and AP-42 Table 1.4-2 (7/98) for SO₂, PM₁₀ (assuming all PM is PM₁₀), and VOC.

IPS Weld-On P-70 Primer PTE Emissions Calculations:

Table A.6 IPS WELD-ON P-70 PRIMER PRE- AND POST PROJECT HOURLY AND ANNUAL PTE FOR VOC EMISSIONS

Emissions Unit	Percent VOC Content (%)	VOC Density (lbs/gal)	Hours of Operation per Year (hrs)	Annual Usage (gal)	Hourly Emissions (lb/hr)	Annual Emissions (T/yr)
IPS Weld-On P-70 Primer	100	4.59	8,760	2,000	1.05	4.59

IPS Weld-On 811 A-B Epoxy PTE Emissions Calculations:

Table A.7 IPS WELD-ON 811 A-B EPOXY PRE- AND POST PROJECT HOURLY AND ANNUAL PTE FOR VOC EMISSIONS

Emissions Unit	Percent VOC Content (%)	VOC Density (lbs/gal)	Hours of Operation per Year (hrs)	Annual Usage (gal)	Hourly Emissions (lb/hr)	Annual Emissions (T/yr)
IPS Weld-On 811 A-B Epoxy	70	0.63	8,760	7.93	0.0004	0.002

Arrow Adhesives AA-2304 Contact Cement PTE Emissions Calculations:

Table A.8 ARROW ADHESIVES AA-2304 CONTACT CEMENT PRE- AND POST PROJECT HOURLY AND ANNUAL PTE FOR VOC EMISSIONS

Emissions Unit	Percent VOC Content (%)	VOC Density (lbs/gal)	Hours of Operation per Year (hrs)	Annual Usage (gal)	Hourly Emissions (lb/hr)	Annual Emissions (T/yr)
Arrow Adhesives AA-2304 Contact Cement	100	4.59	8,760	100	0.05	0.23

IPS 1969 Green Glue PTE Emissions Calculations:

Table A.9 IPS 1969 GREEN GLUE PRE- AND POST PROJECT HOURLY AND ANNUAL PTE FOR VOC EMISSIONS

Emissions Unit	Percent VOC Content (%)	VOC Density (lbs/gal)	Hours of Operation per Year (hrs)	Annual Usage (gal)	Hourly Emissions (lb/hr)	Annual Emissions (T/yr)
IPS 1969 Green Glue	80	4.84	8,760	300	0.13	0.58

IPS Weld-On 711 White Glue PTE Emissions Calculations:

Table A.10 IPS WELD-ON 711 WHITE GLUE PRE- AND POST PROJECT HOURLY AND ANNUAL PTE FOR VOC EMISSIONS

Emissions Unit	Percent VOC Content (%)	VOC Density (lbs/gal)	Hours of Operation per Year (hrs)	Annual Usage (gal)	Hourly Emissions (lb/hr)	Annual Emissions (T/yr)
IPS Weld-On 711 White Glue	90	5.01	8,760	150	0.08	0.34

IPS Weld-On 711 Grey Glue PTE Emissions Calculations:

Table A.11 IPS WELD-ON 711 GREY GLUE PRE- AND POST PROJECT HOURLY AND ANNUAL PTE FOR VOC EMISSIONS

Emissions Unit	Percent VOC Content (%)	VOC Density (lbs/gal)	Hours of Operation per Year (hrs)	Annual Usage (gal)	Hourly Emissions (lb/hr)	Annual Emissions (T/yr)
IPS Weld-On 711 Grey Glue	90	5.01	8,760	30	0.02	0.07

IPS Weld-On 719 White Glue PTE Emissions Calculations:

Table A.12 IPS WELD-ON 719 WHITE GLUE PRE- AND POST PROJECT HOURLY AND ANNUAL PTE FOR VOC EMISSIONS

Emissions Unit	Percent VOC Content (%)	VOC Density (lbs/gal)	Hours of Operation per Year (hrs)	Annual Usage (gal)	Hourly Emissions (lb/hr)	Annual Emissions (T/yr)
IPS Weld-On 719 White Glue	90	5.01	8,760	1,500	0.77	3.38

IPS Weld-On 719 Grey Glue PTE Emissions Calculations:

Table A.13 IPS WELD-ON 719 GREY GLUE PRE- AND POST PROJECT HOURLY AND ANNUAL PTE FOR VOC EMISSIONS

Emissions Unit	Percent VOC Content (%)	VOC Density (lbs/gal)	Hours of Operation per Year (hrs)	Annual Usage (gal)	Hourly Emissions (lb/hr)	Annual Emissions (T/yr)
IPS Weld-On 719 Grey Glue	90	5.01	8,760	200	0.10	0.45

Appendix C – Facility Comments

The following comments were received from the facility on November 11, 2008:

Facility Comment: The only item that needs to be changed is the contact under PTC Permit.Doc item #5, Responsible Official should read Scott Griffith and his Title should read Engineering/Maintenance Manager.

DEQ Response: The requested change will be made to the permit.